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EXAMINER

CAVALLARI, DANIEL J

ART UNIT

PAPER NUMBER

2836

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/764,343	Applicant(s) MUTABDZIJA ET AL.	
	Examiner Daniel J. Cavallari	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30, 52 and 53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30, 52 and 53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/22/05, 6/16/05/10/24/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, Claims 1-30, 52 and 53 and cancellation of claims 31-51 in the reply filed on 12/11/2006 is acknowledged.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 4/22/2005, 6/16/2005 and 10/24/2005 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Drawings

The drawings are objected to for the following reasons:

Figure 11, and any other depicting prior art, should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1, 7, 8, 13, 16, & 21 are objected to because of the following informalities:

In regard to Claim 1

- Claim 1 recites two different "external systems" and then references "the external system" making it unclear which, if any, of the previously recited "external systems" are being referenced. The claim will be examined as best understood in which "the external system" is taken to mean "an external system".

Appropriate correction is required.

In regard to Claim 13

- The term "LC-type" does not specify a particular oscillator or limit the oscillator to inductor and capacitor components, as further illustrated by the dependant claim stating the oscillator is a crystal. The term, "LC-type" will be examined as best understood to read on any oscillator producing a clocked output.

In regard to Claim 7, 8, 21

- The claim recites "the external system" making it unclear which "external system", if any, is being referenced. The claim will be examined as best understood to mean "an external system".

In regard to Claim 16

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- Claim 8 recites "The battery according to claim 52, wherein the manufacturing information includes..." however claim 52 does not recite "manufacturing information". The claim will be examined as best understood to be dependant on claim 53, which does recite "manufacturing information".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 24, 25, & 27-30 are rejected under 35 U.S.C. 102^e(b) as being anticipated by Blair et al. (US 6,700,351).

CN 3/5/07

In regard to Claim 1

A battery comprising:

- One or more cells (5, See Figure 1) that provide power to at least one output (8, See Figure 2).

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- A monitor (7, See Figure 2 and 2 & 3 See Figure 1) that is adapted to monitor and store performance information relating to the operation of the one or more cells (See Column 9, Lines 22-37) and which is adapted to communicate with an external system (ie. user) (See Column 3, Lines 58-63) and that is adapted to receive a monitor signal from an external system (ie. user input) wherein the monitor is coupled to the one or more cells and is adapted to receive power for an external system (7, See Figure 2).

In regard to Claim 2

- The battery in combination with an uninterruptible power supply system (See Column 2, lines 26-43).

In regard to Claim 3

- Wherein the monitor is adapted to perform a reset if the received power is insufficient (See Column 10, Lines 13-31). [The examiner notes that Blair teaches resetting the monitor but does not specifically teach resetting "if the received power is insufficient" however it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.]

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In regard to Claims 4, 5, & 6

- Wherein the monitor includes nonvolatile EEPROM memory in which the monitor is adapted to store performance information (See Column 9, lines 22-37).

In regard to Claim 24

- Wherein the monitor is adapted to communicate the number of discharges of the battery to the external system (See Column 9, Lines 22-39).

In regard to Claim 25

- Wherein the monitor is adapted to communicate the software identifier (module hardware compatibility) of the monitor to the external system (See Column 9, Lines 22-39).

In regard to Claim 27

- Wherein the performance information includes an accumulated time the battery is in a charge state (total time on battery) (See Column 9, Lines 22-39).

In regard to Claim 28

- Wherein the performance information includes an accumulated time that the battery is in the floating state (float charged state) read on by the total system operation time (See Column 9, Lines 22-67).

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In regard to Claim 29

- Wherein the performance information includes an accumulated time the battery is in a discharge state, read on by total watt-hours delivered on battery (See Column 9, Lines 22-67).

In regard to Claim 30

- Wherein the performance information includes a maximum temperature experienced by the battery, read on by the total counts of over temperature (See Column 9, Lines 22-67).

Claims 1, 7, 8, 14, 15, 20-23, 26, & 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Downs et al. (US 2001/0009361).

In regard to Claim 1

A battery comprising:

- One or more cells (154, See Figure 1) that provide power to at least one output (Vdd).
- A monitor (102) that is adapted to monitor and store performance information relating to the operation of the one or more cells (See Paragraph 16) and which is adapted to communicate with an external system (Registers 130, 132, 134, 136, 138) and adapted to receive a monitor signal from an external system (HOST, See Figure 1) wherein the monitor is coupled to the one or more cells

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and is adapted to receive power from the monitor from the external system (HOST) (See Paragraph 17).

In regard to Claim 7

- Wherein the monitor is adapted to communicate with the external system by interrupting current of received power provided by the external system (HOST) [The examiner notes that the monitor receives data in the absence of normal power (current interruption) (See Paragraph 17)].

In regard to Claim 8

- Wherein the monitor (102) is adapted to receive a monitor signal from an external system (line DQ) (See Paragraphs 16-17) and wherein the monitor (102) is adapted to receive power from an external system (HOST) (See Paragraph 16).

In regard to Claim 14, 15, 53

- Wherein the monitor is adapted to store manufacturing information (model type) (ie. serial number) relating to the battery (See Paragraph 16). [The examiner further notes that Downs teaches register capable of storing any type of information and it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.]

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In regard to Claim 20

- Wherein the battery further comprises a temperature sensor (114, See figure 1) and wherein the manufacturing information includes one or more constants relating to the temperature sensor (ie. serial number) and wherein the monitor is adapted to communicate the one or more constant to the external system (HOST) [Wherein the monitoring circuit provide the information to the wire DQ, See Figure 1].

In regard to Claim 21

- Wherein the battery further comprises a resistor (Rsens, See Figure 1) used to detect current provided by the battery, and wherein the manufacturing information includes parameters related to the resistor (ie. serial number) to an external system (DQ, See Figure 1).

In regard to Claim 22

- Wherein the battery is adapted to store performance information indicating performance of the battery (temperature and battery registers 130 & 132, See Figure 1).

In regard to Claim 23

- Wherein the monitor is adapted to store performance information periodically (See Paragraph 20).

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In regard to Claim 26

- Wherein the performance information includes a temperature of the battery (See Paragraphs 14-16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 10-13, & 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downs in view of Wendelrup et al. (US 6,584,329).

In regard to Claims 9, 11, & 12

Incorporating all arguments above of the battery taught by Downs et al. (hereinafter referred to as Downs), Downs fails to teach the particular communication means used in the battery system.

Wendelrup et al. (hereinafter referred to as Wendelrup) teaches a battery monitoring system wherein data is adapted to be transmitted in an asynchronous manner (See Column 3, Lines 29-34). Wendelrup further teaches wherein a monitor (ie. battery 103) is adapted to receive, after the start of communication is detected, a request message (301) from the external system (ie. electronic device 401) (Column 4, Line 56 to Column 5, Line 24) and wherein the monitor (103) is adapted to transmit a

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response message (402) in response to the received request message (401) (See Figure 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the asynchronous data communication taught by Wendelrup with the battery monitoring system of Downs who is silent in regard to the particular data communication means used. The motivation would have been to utilize a communication means well known in the art and a "handshaking" type means to ensure communication is working (See Wendelrup Column 1, Line 58 to Column 2, Line 6).

Downs further teaches:

In regard to Claim 10

- Wherein start of communication with the battery is initiated by the external system interrupting the current of the power supply [The examiner notes that the monitor receives data in the absence of normal power (current interruption) (See Paragraph 17].

In regard to Claims 13 & 52

- Wherein the monitor comprises an LC-type crystal oscillator (crystal 150, See Figure 1) that provides clocking for the monitor (102).

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Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downs in view of Bohne et al. (US 2004/0160210).

Incorporating all arguments above of the battery system taught by Downs, Downs teaches the use of a "Smart Battery (See Paragraph 13) but fails to explicitly teach wherein the manufacturing information includes the manufacturing date, battery constants, and rating information.

Bohne et al. (hereinafter referred to as Bohne) teaches a battery device using a Smart Battery wherein the manufacturing date of the battery, battery constants related to the batteries expected performance (ie. type of cell) are stored in memory and transmitted when necessary (See Paragraph 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the battery information taught by Bohne et al. with the Smart Battery taught by Downs. The motivation would have been to provide the information to better control the battery and determine operating parameters, for example, determine that the battery has reached its expiration date and should be changed based on the date it was manufactured or identify a battery recall based on the date it was manufactured).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Cavallari whose telephone number is (571)272-8541. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Cavallari

February 26, 2007


CHAU N. NGUYEN
PRIMARY EXAMINER